REMARKS

The Advisory Action mailed October 22, 2009 has been received and carefully noted. Claims 1-4, 6-14, 16-24, and 27 are currently pending in the subject application and are presently under consideration.

Please amend the claims as shown above. A listing of claims can be found on pages 2-7 of this Response. Support for the amended claim language can be found in the Specification as filed, for instance at paragraph 0032.

Favorable reconsideration of the pending claims is respectfully requested in view of the following comments.

I. Rejection of Claims Under 35 U.S.C. §103(a)

Claims 1-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Andrews *et al.* (U.S. 2005/0122339) ("Andrews") in view of Rosenbluth *et al.* (U.S. 2003/0046488) ("Rosenbluth"). Claims 6-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Andrews in view of Rosenbluth, and further in view of Hussain (U.S. 2004/0233208) ("Hussain") and Chrysos *et al.* (U.S. 6,549,930) ("Chrysos"). Claims 11-13, 16-20, and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hussain in view of Chrysos. Claim 14 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hussain in view of Chrysos, and further in view of Baylor *et al.* (U.S. 2002/0078124) ("Baylor"). Claim 21 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hussain in view of Chrysos, and further in view of Andrews *et al.* (U.S. 2005/0122339) ("Andrews"). Claims 23, 24, and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Andrews, in view of Rosenbluth, and Hussain. However, these references do not teach or suggest all the limitations of the claims as amended.

The claims are generally directed to rendering graphics using a render-cache with a multi-threaded, multi-core graphics processor. In particular, amended independent claim 1 recites "wherein **a single look-up** of the render-cache controller acquires information to control the thread being dispatched to or blocked from the graphics engine based on the data coherency

maintained by the render-cache controller and the order of the thread maintained by the render-cache controller" (emphasis added). The Examiner concedes that Andrews does not teach dispatching threads to a graphics engine as related to pixel data, and therefore offers Rosenbluth (*See* Final Office Action, pg. 4). Rosenbluth is generally directed to a lookup mechanism for packet processing. Rosenbluth does not recite a single look-up of a render-cache controller. No such element in Rosenbluth corresponds to a render-cache controller. For example, Rosenbluth states that thread order is maintained by "local inter-thread signaling and by ensuring that read reference and modification activity completes before that same data in [*sic*] needed by successive threads." *See* Rosenbluth, paragraph 0083. No mention of a controller is made with respect to thread order.

Amended independent claims 11, 18, and 23 recite "wherein **a single look-up** of the render-cache controller acquires information to control a thread being dispatched to or blocked from the graphics engine based on the content addressable memory, the pixel mask array, the cache-line status array, and an order of the threads in line with the multithreading, multi-core graphics engine processing the pixel data corresponding to each thread maintained by the render-cache controller" (emphasis added).

Rosenbluth does not disclose a **single look-up** of a render-cache controller to dispatch or block a thread consistent with the information stored in the render-cache controller for data coherency and maintaining the order of threads. The content addressable memory in the render-cache controller is a basis for the look-up. However, Rosenbluth states that "the strict sequential ordering of the execution of context threads in a given stage is maintained **not** through the use of CAM, but instead by using local inter-thread signaling and by ensuring that read reference and modification activity completes before that same data in [*sic*] needed by successive threads." *See* Rosenbluth, paragraph 0083. If the Examiner is to maintain these rejections, the Applicant respectfully requests that the Examiner identify which specific element in Rosenbluth teaches the recited render-cache controller having the characteristics recited in the claims.

Any dependent claims not mentioned above are submitted as not being obvious for at least the same reasons given above in support of their base claims. It should be noted that not all of the assertions made in the Office Action, particularly those with respect to the dependent claims, have been addressed here, in the interest of conciseness. The Applicant reserves the right

to challenge any of the assertions made in the Office Action by the Examiner, with respect to the relied upon art references and how they would relate to the Applicant's claim language, including the right to swear behind or otherwise remove an improper art reference.

In view of the above, withdrawal of these rejections is respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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I hereby certify that this paper is being transmitted online via EFS Web to the Patent and Trademark Office, Commissioner for Patents, Post Office Box 1450, Alexandria, Virginia 22313-1450, on 11/17, 2009.

Susan M. Manriquez 11/17/09